In the Claims:

Please add the claim:

43, as detailed below

Claims 1-25. (Canceled).

26. (previously presented) A new method for the synthesis of chlorin e6-transferrin, consisting essentially of:

A.) Immobilization of transferrin to an anion-exchange matrix.

B.) Preparation of coupling agent-modified chlorin *e*6.

C.) Exposure of said immobilized transferrin from 26A to said modified chlorin *e*6 from 26B; OR:

D.) (optional) Direct exposure of said immobilized transferrin from 26A to chlorin *e*6 in the presence of said coupling agent .

E.) Elimination of un-reacted coupling agent, and chlorin *e*6, and modified chlorin *e*6 from the anion-exchange matrix-immobilized chlorin *e*6-transferrin.

F.) Release of the chlorin *e*6-transferrin from the anion-exchange matrix.

G.) Placement of the chlorin *e*6-transferrin into the solution of choice.

H.) Immobilization of chlorin *e*6-transferrin from 26G to a cation-exchange matrix.

I.) Elimination of residual soluble components from the cation-exchange matrix immobilized chlorin *e*6-transferrin.

J.) Release of the chlorin *e*6-transferrin from the cation exchange matrix.

K.) Placement of the chlorin *e*6-transferrin from 26J into the solution of choice.

27. (previously presented) The process as claimed in claim 26, wherein said anion exchange matrix is, but is not limited to, quaternary aminoethyl-sepharose (hereafter referred to as QAE sepharose).

28. (previously presented) The process as claimed in claim 26 wherein said coupling agent is, but is not limited to, 1-Ethyl-3-[3-dimethylaminopropyl] carbodiimide hydrochloride (hereafter referred to as EDC). Wherein EDC is dissolved at, but not limited to, 10 mg/ml, in a solvent of, but not limited to, distilled water.

29. (previously presented) The process as claimed in claim 26, where the presence of a detergent in the solvent used is required for optimum solubility, formation of modified chlorin e6, and release of the conjugate from the matrix. The detergent is, but is not limited to: 3-[(3-cholidamidopropyl) dimethylammonio]- 1-propanesulfonate (hereafter referred to as CHAPS).

30. (previously presented) The process as claimed in claim 26, where an appropriate buffer solution for the optimum formation of and release of the conjugate from the matrix is used. The solvent is, but is not limited to: 20 mM phosphate buffer, pH 7.4 (20 mM Na_2HPO_4, adjusted to pH 7.4 with KH_2PO_4; hereafter referred to

as PB). Wherein a solvent used throughout this invention consists of the PB solution of this claim containing 2 mM of the CHAPS detergent of claim 29 (this solvent is hereafter referred to as PB/CHAPS).

31. (previously presented) The process as claimed in claim 26, wherein the matrix-immobilized chlorin *e*6, modified chlorin *e*6, chlorin *e*6-transferrin, transferrin, and other insoluble material is washed of free chlorin *e*6, modified chlorin *e*6, transferrin, and other soluble material by, but not limited to, repeated centrifugation of the matrix from and re-suspension in an appropriate solvent. of, but not limited to, the PB/CHAPS solvent of claim 30.

32. (previously presented) The process as claimed in claim 26, where chlorin e6-transferrin in a particular solvent is placed into another solvent by the process of, but not limited to, dialysis.

33. (previously presented) The process as claimed in claims 26 and 30, where chlorin *e*6 is dissolved at, but not limited to, 1 mg/ml, in a solvent of, but not limited to, the PB/CHAPS solvent of claim 30.

34. (previously presented) The process as claimed in claims 26, 27, 30, and 31 wherein immobilized transferrin is prepared by exposing an excess of iron-free or iron-saturated transferrin (dissolved in the PB/CHAPS solvent of claim 30) to the QAE-sepharose of claim 27 (equilibrated in and suspended in the same

PB/CHAPS solvent); and allowing the binding to occur to saturation and completion. The sepharose is then washed free of unbound transferrin in like solvent, according to claim 31. Wherein the washed transferrin-QAE sepharose is stored in a minimal volume of the claim 30 PB/CHAPS solvent (hereafter referred to as packed transferrin-QAE sepharose).

35. (previously presented) The process as claimed in claims 26, 28, 33, and 34, wherein immobilized chlorin *e*6-transferrin is prepared using a two step method, by combining 4, but not limited to 4, volumes of chlorin *e*6 solution (from claim 33) with 0.25, but not limited to 0.25, volumes of the EDC solution (from claim 28) for, but not limited to, 20 minutes, at, but not limited to, room temperature. This mixture is subsequently exposed to an excess of packed QAE-sepharose (equilibrated in and suspended in, but not limited to, the PB/CHAPS solvent of claim 30) for, but not limited to, 20 minutes, at, but not limited to, room temperature; wherein the desired modified chlorin *e*6 remains unbound to and is separated from the sepharose by, but not limited to, the washing method of claim 31. Where 4, but not limited to 4, volumes of this EDC-modified chlorin *e*6, is added to 1, but not limited to 1, volume of washed, packed, transferrin-QAE sepharose (from claim 34), and this mixture is incubated for, but not limited to, 20 minutes, at, but not limited to, room temperature, all while mixing, or by the use or any methodology, to ensure a uniform reaction which proceeds to saturation and completion. Wherein the immobilized material is washed free of soluble material according to the wash method of claim 31.

36. (previously presented) The process as claimed in claims 26, 28, 33, and 34, wherein immobilized chlorin *e*6-transferrin is prepared directly when 4, but not limited to 4, volumes of chlorin *e*6 solution (from claim 33), are added to 1, but not limited to 1, volume of washed, packed transferrin-QAE sepharose (from claim 34), and to this is added 0.25, but not limited to 0.25, volumes of EDC solution (from claim 28), and this mixture is incubated for, but not limited to, 20 minutes, at, but not limited to, room temperature, all while mixing, or by the use or any methodology, to ensure a uniform reaction which proceeds to saturation and completion. Wherein the immobilized material is washed free of soluble material according to the wash method of claim 31.

37. (previously presented) The process as claimed in claims 26, 35, and 36, wherein washed immobilized chlorin e6-transferrin from claim 35 or 36 is released from the sepharose by, but not limited to, suspending the immobilized preparation in, but not limited to, the PB/CHAPS solvent of claim 30 containing 0.5 M NaCl, and this mixture is incubated for, but not limited to, 20 minutes, at, but not limited to, room temperature, all while mixing. Wherein the released chlorin *e*6 transferrin is washed free of the agarose according to the wash method of claim 31. Wherein the released chlorin *e*6 transferrin is placed in a solvent of, but not limited to, the PB solvent of claim 30 by, but not limited to, the dialysis method of claim 32.

38. (previously presented) The process as claimed in claims 26, and 37, whereby chlorin *e*6-transferrin is further purified by being placed in a low pH solvent of, but not limited to, 25 mM sodium acetate, pH 4.8, using the dialysis method of claim 32, and is reacted with a negatively charged matrix such as, but not limited to, sulfo-propyl sepharose, in a solvent of, but not limited to, 25 mM sodium acetate, 2 mM CHAPS (from claim 29), pH 4.8. Whereby the chlorin *e*6-transferrin binds to the matrix and any free, un-modified chlorin *e*6 does not. Whereby chlorin *e*6-transferrin immobilized to sulfo-propyl sepharose is washed free of soluble material by, but not limited to, the wash method of claim 31, using the buffer of , but not limited to, 25 mM sodium acetate, 2 mM CHAPS (from claim 29), pH 4.8.

39. (previously presented) The process as claimed in claims 26, and 38, where the sulfo-propyl sepharose bound chlorin *e*6-transferrin is released by, but not limited to, re-suspension of the sepharose in the PB/CHAPS solvent of claim 30, containing, but not limited to, 1.0 M NaCl; and this mixture is incubated for, but not limited to, 20 minutes, at, but not limited to, room temperature, all while mixing. Wherein the released chlorin *e*6 transferrin is washed free of the sepharose according to the wash method of claim 31, using the PB/CHAPS/1.0 M NaCl solvent. Whereby the released chlorin *e*6 transferrin is placed in a solvent of, but not limited to, the PB solvent of claim 30 by, but not limited to, the dialysis method of claim 32.

40. (previously presented) The process as claimed in claims 26, 37, and 39, where said chlorin e6-transferrin is delivered *in vitro* or *in vivo* by, but not limited to, pipetting, injection, or other methods such as, but not limited to, catheter, etc.

41. (previously presented) The process as claimed in claim 40, where said chlorin e6-transferrin-binding cells residing in said *in vitro* or *in vivo* systems are damaged or destroyed by exposure to light, where said light is any light source capable of converting chlorin *e6* to the toxic form, including, but not limited to, fluorescent, incandescent, and laser light.

42. (previously presented) The process as claimed in claims of 26 and 41, wherein chlorin e6-transferrin so synthesized is used *in vivo* or *in vitro* to detect, treat, kill, or otherwise effect transferrin binding cells, or other transferrin binding components.

43. (new) The process as claimed in claims 26 and 34, wherein said transferrin consists of, but is not limited to, human transferrin. Wherein said transferrin is, but is not limited to, being iron-saturated. Wherein said transferrin is obtained in a high degree of purity as accepted in the trade, as currently made available by many commercial sources. Wherein said transferrin may be purified from any source including, but not limited to, the blood of patients to be treated, using any one of a number of methods available in the prior art.